Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/659,568	CHEN ET AL.
	Examiner	Art Unit	
	Amelia Rutledge	2176	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _11 September 2003_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-32_ is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-32_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _____ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some * c)☐ None of:

         1.☐ Certified copies of the priority documents have been received.

         2.☐ Certified copies of the priority documents have been received in Application No. _____.

         3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
     Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

DETAILED ACTION

1.   This action is responsive to communications: original application, filed

09/11/2003.

2.   Claims 1-32 are pending in the case. Claims 1, 14, and 23 are independent

claims.

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

4.   **Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being**

indefinite for failing to particularly point out and distinctly claim the subject

matter which applicant regards as the invention.

5.   Claim 1 recites the limitation *locating information related to the annotation using*

the annotation and the context data; and collecting context data proximal to the

annotation in lines 3-6. There is insufficient antecedent basis for this limitation in the

claim because there is no mention of collecting context data prior to the step of *locating*

information related to the annotation using the annotation and the context data.

6.   Claim 11 recites the limitation *wherein the previous documents are limited to*

documents accessed within a specified time period. There is insufficient antecedent

basis for this limitation in the claim, because claim 11 depends from claim 5 which

depends from claim 1, neither of which recites *previous documents.*

7.   In regard to dependent claims 2-13, claims 2-13 are rejected for fully

incorporating the deficiencies of their base claim.

Claim Rejections - 35 USC § 102

8.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9.   **Claims 1, 2, 8, 10, 12-14, 19, 21, 23, 24, 26, and 28 are rejected under 35**

U.S.C. 102(b) as being anticipated by Price et al. (hereinafter "Price"), "Linking By

Inking: Trailblazing in a Paper-like Hypertext", *HyperText 98***, Pittsburgh, PA,**

copyright ACM 1998, p. 30-39.

Independent claim 1 cites: *A method, comprising: monitoring an electronic*

document for user annotations; recognizing entry of an annotation into the electronic

document; locating information related to the annotation using the annotation and the

context data; and collecting context data proximal to the annotation.

Price teaches XLibris, a hypertext system using a paper document metaphor, i.e., an

electronic document. Price teaches monitoring an electronic document for user

annotations and recognizing entry of an annotation into the electronic document (p. 32,

Fig. 2; p. 33, Col. 1, par. 2; p. 33, Col. 2, par. 4) because as a reader annotates a

document the system performs queries and displays links to related pages (Fig. 3). The

queries locate documents related to the annotation using the annotation and context

data proximal to the annotation, because each annotation is interpreted as a text selection and transformed into a list of word weights (p. 34, Col. 2, par. 5-p. 35, Col. 1, par. 2). Also see p. 35, "Ink Anchors", where annotations are used to contextually link to nearby annotations or relevant annotations.

Regarding dependent claim 2, Price teaches extracting words from text proximal to the annotation (p. 34, Col. 1, par. 2-3).

Regarding dependent claim 8, Price teaches searching the electronic document for terms that match or are similar to the annotation (p. 35, "Ink Anchors").

Regarding dependent claims 10 and 12, Price teaches that tapping on a source ink anchor, i.e., annotation, produces a list of clippings that contain matching target ink anchors, or clippings of documents that correspond to multiple annotations made by the reader (p. 35, "Ink Anchors", especially Col. 1, par. 7). Price teaches determining keywords from annotations made by the user.

Regarding dependent claim 13, Price teaches that an annotation comprises a circled phrase (p. 34, par. 2).

Independent claim 14 cites: *A system, comprising: an annotation monitoring module configured to monitor an electronic document for entry of an annotation; an extraction module configured to collect context data that appears near an annotation entered into the electronic document and to extract one or more keywords from the context data; an information processing module configured to utilize the annotation and the keywords to locate related content.*

Price teaches XLibris, a hypertext system using a paper document metaphor, i.e., an

electronic document. Price teaches monitoring an electronic document for user

annotations and recognizing entry of an annotation into the electronic document (p. 32,

Fig. 2; p. 33, Col. 1, par. 2; p. 33, Col. 2, par. 4) because as a reader annotates a

document the system performs queries and displays links to related pages (Fig. 3). The

queries locate documents related to the annotation using the annotation and context

data proximal to the annotation, because each annotation is interpreted as a text

selection and transformed into a list of word weights (p. 34, Col. 2, par. 5-p. 35, Col. 1,

par. 2). Also see p. 35, "Ink Anchors", where annotations are used to contextually link

to nearby annotations or relevant annotations. Price teaches search and extraction

modules (p. 35-36, "Implementation").

Regarding dependent claim 19, Price teaches extracting keywords from text

near to the annotation (p. 34, Col. 1, par. 2-3).

Regarding dependent claim 21, Price teaches that tapping on a source ink

anchor, i.e., annotation, produces a list of clippings that contain matching target ink

anchors, or clippings of documents that correspond to multiple annotations made by the

reader (p. 35, "Ink Anchors", especially Col. 1, par. 7). Price teaches determining

keywords from annotations made by the user.

Independent claim 23 cites: *One or more computer-readable media containing*

computer-executable instructions that, when executed on a computer, perform the

following steps: recognizing an annotation entered into an electronic document by a

user; collecting context data related to the location of the annotation;

Price teaches XLibris, a hypertext system using a paper document metaphor, i.e., an

electronic document. Price teaches monitoring an electronic document for user

annotations and recognizing entry of an annotation into the electronic document (p. 32,

Fig. 2; p. 33, Col. 1, par. 2; p. 33, Col. 2, par. 4) because as a reader annotates a

document the system performs queries and displays links to related pages (Fig. 3). The

queries locate documents related to the annotation using the annotation and context

data proximal to the annotation, because each annotation is interpreted as a text

selection and transformed into a list of word weights (p. 34, Col. 2, par. 5-p. 35, Col. 1,

par. 2). Also see p. 35, "Ink Anchors", where annotations are used to contextually link

to nearby annotations or relevant annotations.

Claim 23 also cites: *and locating additional content that may be of interest to the*

user by executing a search with one or more words indicated by the annotation and one

or more keywords derived from the context data.

Price teaches that annotations that select a phrase result in weighted queries based on

the entire surrounding sentence with the emphasis on the selected words (p. 34, Col. 1,

par. 2), resulting in a query for a search with words indicated by the annotation and

keywords derived from the context.

Regarding dependent claim 24, Price teaches that an annotation comprises a

circled phrase (p. 34, par. 2).

Regarding dependent claim 26, Price teaches locating keywords on the target

page, which may be a page of the document (p. 34, par. 1).

Regarding dependent claim 28, Price teaches that tapping on a source ink

anchor, i.e., annotation, produces a list of clippings that contain matching target ink

anchors, or clippings of documents that correspond to multiple annotations made by the

reader (p. 35, "Ink Anchors", especially Col. 1, par. 7; Fig. 6). Price teaches determining

keywords from annotations made by the user.

Claim Rejections - 35 USC § 103

10.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

11.   **Claims 3, 4, 9, 16-18, 20, 25, 27, and 30 are rejected under 35 U.S.C. 103(a)**

as being unpatentable over Price as applied to claims 1, 2, 8, 10, 12-14, 19, 21, 23,

24, 26, and 28 above, and further in view of Haveliwala et al. (hereinafter

"Haveliwala"), "Evaluating Strategies for Similarity Search on the Web",

WWW2002, May 2002, p. 432-442.

Regarding dependent claim 3, while Price teaches a hypertext application,

Price does not explicitly teach locating objects near to an annotation object in a

document object model (DOM) associated with the annotation. However, Haveliwala

teaches locating objects near to an object, i.e., anchor, in an associated DOM (p. 432,

Col. 2, par. 4-p. 433, par. 2) because Haveliwala teaches locating objects in an HTML

page. Both Price and Haveliwala are analogous art because both are directed toward

relevance searching of documents based on keyword weight. It would have been

obvious to one of ordinary skill in the art at the time of the invention to apply Haveliwala

to Price, because Haveliwala presents an efficiency comparison of similarity search

algorithms which produce a ranked listing of documents similar to that document

(Haveliwala, p. 432, Introduction, par. 1), which would improve the efficiency of the

ranked listing of relevant documents in the reading list disclosed by Price (p. 34, Col. 2,

par. 2-4).

Regarding dependent claim 4, while Price teaches interpreting each annotation

as a text selection transformed into a list of word weights, Price does not explicitly teach

defining a first and second distance from the annotation and weighting keywords

accordingly. Haveliwala teaches defining a first and second distance from an anchor by

setting a bounding window size and selecting the keywords within (p. 435, Sect. 3.1).

Haveliwala teaches weighting terms, i.e., keywords, based on their distance from the

anchor (p. 437, Sect. 5.2, par. 1) with terms having a greater weight according to the

distance from the anchor, as shown in the logarithmic calculation. Haveliwala teaches

locating relevant documents related to the anchor utilizing the weighted keywords. Both

Price and Haveliwala are analogous art because both are directed toward relevance

searching of documents based on keyword weight. It would have been obvious to one

of ordinary skill in the art at the time of the invention to apply Haveliwala to Price,

because Haveliwala presents an efficiency comparison of similarity search algorithms

which produce a ranked listing of documents similar to that document (Haveliwala, p.

432, Introduction, par. 1), which would improve the efficiency of the ranked listing of relevant documents in the reading list disclosed by Price (p. 34, Col. 2, par. 2-4).

Regarding dependent claim 9, while Price does not explicitly teach searching remote sites for documents containing terms that match or are similar to the annotation, Haveliwala teaches searching the web for documents containing similarity terms with anchors (Abstract). Both Price and Haveliwala are analogous art because both are directed toward relevance searching of documents based on keyword weight. It would have been obvious to one of ordinary skill in the art at the time of the invention to apply Haveliwala to Price, because Haveliwala presents an efficiency comparison of similarity search algorithms which produce a ranked listing of documents similar to that document (Haveliwala, p. 432, Introduction, par. 1), which would improve the efficiency of the ranked listing of relevant documents in the reading list disclosed by Price (p. 34, Col. 2, par. 2-4).

Regarding dependent claim 16, while Price teaches interpreting each annotation as a text selection transformed into a list of word weights, Price does not explicitly teach weighting each keyword according to a relative distance that the keyword is from the annotation. Haveliwala teaches defining a relative distance from an anchor by setting a bounding window size and selecting the keywords within (p. 435, Sect. 3.1). Haveliwala teaches weighting terms, i.e., keywords, based on their distance from the anchor (p. 437, Sect. 5.2, par. 1) with terms having a greater weight according to the relative distance from the anchor, as shown in the logarithmic calculation. Haveliwala teaches locating relevant documents related to the anchor utilizing the

weighted keywords. Both Price and Haveliwala are analogous art because both are directed toward relevance searching of documents based on keyword weight. It would have been obvious to one of ordinary skill in the art at the time of the invention to apply Haveliwala to Price, because Haveliwala presents an efficiency comparison of similarity search algorithms which produce a ranked listing of documents similar to that document (Haveliwala, p. 432, Introduction, par. 1), which would improve the efficiency of the ranked listing of relevant documents in the reading list disclosed by Price (p. 34, Col. 2, par. 2-4).

Regarding dependent claims 17 and 18, while Price does not explicitly teach that the results of the search are re-ranked according to the weighted keywords, Haveliwala teaches an algorithm to generate a document similarity index (p. 439, Sect. 6.2). Haveliwala teaches generating a query derived from the anchor and weighted keywords (p. 439, Fig. 11). It would have been obvious to one of ordinary skill in the art at the time of the invention that the document similarity index could be used to order or rank the search results according to the weighted keywords. Both Price and Haveliwala are analogous art because both are directed toward relevance searching of documents based on keyword weight. It would have been obvious to one of ordinary skill in the art at the time of the invention to apply Haveliwala to Price, because Haveliwala presents an efficiency comparison of similarity search algorithms which produce a ranked listing of documents similar to that document (Haveliwala, p. 432, Introduction, par. 1), which would improve the efficiency of the ranked listing of relevant documents in the reading list disclosed by Price (p. 34, Col. 2, par. 2-4).

Regarding dependent claim 20, while Price does not explicitly teach that the

related content located by the information processing module comprises documents on

a network that contain one or more of the keywords, Haveliwala teaches searching the

web for documents containing similarity terms with anchors (Abstract). Both Price and

Haveliwala are analogous art because both are directed toward relevance searching of

documents based on keyword weight. It would have been obvious to one of ordinary

skill in the art at the time of the invention to apply Haveliwala to Price, because

Haveliwala presents an efficiency comparison of similarity search algorithms which

produce a ranked listing of documents similar to that document (Haveliwala, p. 432,

Introduction, par. 1), which would improve the efficiency of the ranked listing of relevant

documents in the reading list disclosed by Price (p. 34, Col. 2, par. 2-4).

Regarding dependent claim 25, claim 25 is directed toward substantially similar

subject matter as claimed in dependent claim 3, and is rejected along the same

rationale.

Regarding dependent claim 27, claim 27 is directed toward substantially similar

subject matter as claimed in dependent claim 20, and is rejected along the same

rationale.

Regarding dependent claim 30, claim 30 is directed toward substantially similar

subject matter as claimed in dependent claim 17, and is rejected along the same

rationale.

12.   **Claims 5-7, 11, 15, 22, and 29 are rejected under 35 U.S.C. 103(a) as being**

unpatentable over Price as applied to claims 1, 2, 8, 10, 12-14, 19, 21, 23, 24, 26,

and 28 above, and further in view of Szabo et al. (hereinafter "Szabo"), U.S. Patent

No. 6,868,525, issued March 2005.

Regarding dependent claims 5-7, while Price teaches deriving search terms,

Price does not explicitly teach comparing the search terms to a history of search terms;

and weighting each of the search terms according to whether a particular search term is

included in the history of search terms, a higher weight being assigned to a search term

that is included in the history of search terms. However, Szabo teaches comparing a

search term to a history of search terms used by a particular user or group of users and

weighting the search terms accordingly (Col. 11, I. 12-44) in the form of adaptive

navigation support (Col. 14, I. 1-30; Col. 32, I. 15-30) and weighted search (Col. 41, I.

41-Col. 42, I. 16). Both Price and Szabo are analogous art since both are directed

toward keyword search of hypertext documents. It would have been obvious to one of

ordinary skill in the art at the time of the invention to apply Szabo to Price so that Price

would have the benefit of an intelligent agent system with user profile information (Col.

33, I. 33-54), thereby improving the efficiency of document retrieval in the hypertext

system disclosed by Price.

Regarding dependent claim 11, while Price does not explicitly teach that the

previous documents are limited to documents accessed within a specified time period,

Szabo teaches using a user profile to set arbitrary limits in the access of documents

(Col. 40, I. 15-56), and setting preferences in the access of documents from a database.

It would have been obvious to one of ordinary skill in the art at the time of the invention that the database query formulation and user profile taught by Szabo would allow a search query for previous documents to be limited to documents accessed within a specified time period, since page access information was normally maintained in user profiles at the time of the invention. Both Price and Szabo are analogous art since both are directed toward keyword search of hypertext documents. It would have been obvious to one of ordinary skill in the art at the time of the invention to apply Szabo to Price so that Price would have the benefit of an intelligent agent system with user profile information (Col. 33, l. 33-54), thereby improving the efficiency of document retrieval in the hypertext system disclosed by Price.

Regarding dependent claim 15, claim 15 is directed toward substantially similar subject matter as claimed in claim 5, and is rejected along the same rationale.

Regarding dependent claim 22, while Price does not explicitly teach a user interface configured to present keywords to the user and provide for selection of none or one or more of the keywords by the user, Szabo teaches a user interface configured to present the user with keywords for a search query and provide for selection (Col. 18, l. 21-30). Both Price and Szabo are analogous art since both are directed toward keyword search of hypertext documents. It would have been obvious to one of ordinary skill in the art at the time of the invention to apply Szabo to Price so that Price would have the benefit of an intelligent agent system with user profile information (Col. 33, l. 33-54), thereby improving the efficiency of document retrieval in the hypertext system disclosed by Price.

Regarding dependent claim 29, while Price does not explicitly teach deriving

keywords from the context data by identifying words that frequently appear with the

annotation in other documents accessed by the user, Szabo teaches comparing a

search term to a history of search terms used by a particular user or group of users and

weighting the search terms accordingly (Col. 11, l. 12-44) in the form of adaptive

navigation support (Col. 14, l. 1-30; Col. 32, l. 15-30) and weighted search (Col. 41, l.

41-Col. 42, l. 16). Both Price and Szabo are analogous art since both are directed

toward keyword search of hypertext documents. It would have been obvious to one of

ordinary skill in the art at the time of the invention to apply Szabo to Price so that Price

would have the benefit of an intelligent agent system with user profile information (Col.

33, l. 33-54), thereby improving the efficiency of document retrieval and automatic query

generation in the hypertext system disclosed by Price.

13.   **Claims 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable**

over Price in view of Haveliwala as applied to claim 30 above, and further in view

of Szabo.

        Regarding dependent claims 31 and 32, Price in view of Haveliwala does not

explicitly teach referring to a keyword history list that includes keywords previously used

by a current user, where weighting the keywords comprises assigning a higher weight to

keywords included in the keyword history list. However, Szabo teaches comparing a

search term to a history of search terms used by a particular user or group of users and

weighting the search terms accordingly (Col. 11, l. 12-44) in the form of adaptive

navigation support (Col. 14, I. 1-30; Col. 32, I. 15-30) and weighted search (Col. 41, I. 41-Col. 42, I. 16). Price, Haveliwala, and Szabo are analogous art since all three inventions are directed toward keyword search of hypertext documents. It would have been obvious to one of ordinary skill in the art at the time of the invention to apply Szabo to Price in view of Haveliwala so that Price in view of Haveliwala would have the benefit of an intelligent agent system with user profile information (Col. 33, I. 33-54), thereby improving the efficiency of document retrieval in the hypertext system disclosed by Price.

Conclusion

14.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Graham et al.	U.S. Patent No.	6,457,026	issued	September 2002
Schuetze et al.	U.S. Patent No.	6,941,321	issued	September 2005
Cullen et al.	U.S. Patent No.	6,397,213	issued	May 2002

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amelia Rutledge whose telephone number is 571-272-7508. The examiner can normally be reached on Monday - Friday 9:30 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Herndon can be reached on 571-272-4136. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

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